

WHAT IS CLAIMED IS:

1. A distributed computing system for distributed web applications, supporting client/server affinity detection,
5 comprising:
- a server;
- a client, adapted to send requests to the server; and
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- a numeric-valued generation ID, accompanying each request from the client to the server, incremented by the server upon receiving the request, and recorded by the server before being returned to the client, and
15 such that if the generation ID accompanying a request from the client differs from the generation ID recorded by the server, an affinity break between the client and the server is detected.
2. The system as recited in claim 1, further comprising a plurality of clients adapted to send requests to the server, wherein each client has a unique user ID.
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3. The system as recited in claim 2, further comprising
25 an affinity command, which combines the generation ID accompanying a request with the user ID of the client sending the request, and by means of which the server may detect an affinity break with a particular client among the plurality of clients.
4. The system as recited in claim 3, wherein the server comprises a Java Virtual Machine (JVM) equipped with a cache.
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5. The system as recited in claim 4, further comprising a plurality of servers, wherein affinity between a client and first server may be broken as a result of the client sending a request to a second server.

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6. The system as recited in claim 4, wherein an affinity break between a client and a server may occur if the server becomes unavailable.

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7. The system as recited in claim 4, wherein detection of an affinity break between a client and a server may be used to invalidate contents of the cache in the server.

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8. The system as recited in claim 4, wherein the affinity command is sent by the server to the client and returned by the client to the server in a cookie.

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9. The system as recited in claim 1, further comprising an object-oriented software system.

10. A method for detecting affinity breaks between a client and a server equipped with a cache in a software system for distributed web applications, comprising:

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the client sending a request to the server,
accompanied by a numeric-valued generation ID (GID);

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the server receiving the request and the GID from
the client, and comparing the received GID against a
previously recorded GID;

if the received GID matches the recorded GID,
incrementing the recorded GID, and returning it to the
client as the new GID; and

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if the received GID does not match the recorded GID, reporting an affinity break between the client and the server.

- 5 11. The method as recited in claim 10, further comprising
detecting affinity breaks between a plurality of clients and
a server, wherein each client has a unique user ID.
- 10 12. The method as recited in claim 11, further comprising
sending an affinity command with each request from a client,
such that the affinity command combines the GID with the
user ID of the client sending the request, and detecting an
affinity break with a particular client among the plurality
of clients by means of the user ID.
- 15 13. The method as recited in claim 11, wherein the software
system comprises an object-oriented software system.
- 20 14. The method as recited in claim 12, further comprising
detecting affinity breaks between a plurality of clients and
a plurality of servers, each of which is equipped with a
cache, such that affinity between a client and first server
may be broken as a result of the client sending a request to
a second server.
- 25 15. The method as recited in claim 14, wherein an affinity
break between a client and a server may occur if the server
becomes unavailable.
- 30 16. The method as recited in claim 15, wherein detection of
an affinity break between a client and a server may be used
to invalidate contents of the cache in the server.

17. The method as recited in claim 16, wherein the affinity command is sent by the server to the client and returned by the client to the server in a cookie.

5 18. A computer product, comprising a web server equipped with a cache and a software system, wherein the web server includes a processor, memory, mass storage and a network interface, and the software system is adapted to detect affinity breaks between a client and the web server.

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19. A computer program product in a computer readable medium for use in detecting affinity breaks between a client and a server, the computer program product comprising:

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instructions for the server receiving the request and the GID from the client, and comparing the received GID against a previously recorded GID;

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instructions for incrementing the recorded GID, and returning it to the client as the new GID, if the received GID matches the recorded GID; and

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instructions for reporting an affinity break between the client and the server, if the received GID does not match the recorded GID.

20. The product as recited in claim 19 further comprising:

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instructions for the client sending a request to the server, accompanied by a numeric-valued generation ID (GID);

21. A server including memory and processor detecting affinity breaks, comprising;

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Variable	Mean	SD	Min	Max
Age	35.2	12.5	18	65
Gender	50.0	50.0	0	100
Marital Status	65.0	45.0	0	100
Education	12.5	2.5	8	16
Income	3500	1500	1000	8000
Health Status	75.0	25.0	50	100
Stress Level	60.0	20.0	40	80
Life Satisfaction	70.0	30.0	50	100
Work-Life Balance	65.0	25.0	40	90
Family Support	80.0	20.0	60	100
Community Involvement	55.0	35.0	20	90
Personal Growth	60.0	30.0	30	90
Financial Stability	70.0	25.0	50	90
Emotional Well-being	75.0	20.0	55	95
Physical Health	85.0	15.0	70	100
Mental Health	70.0	25.0	45	95
Social Relationships	65.0	30.0	35	95
Work Satisfaction	60.0	35.0	25	95
Life Goals Achievement	55.0	40.0	10	90
Overall Quality of Life	70.0	30.0	40	100

Variable	Mean	SD	Min	Max
Age	35.2	12.5	18	65
Gender	50.0	50.0	0	100
Marital Status	65.0	45.0	0	100
Education	12.5	2.5	8	16
Income	3500	1500	1000	8000
Health Status	75.0	25.0	50	100
Stress Level	60.0	20.0	40	80
Life Satisfaction	70.0	30.0	50	100
Work-Life Balance	65.0	25.0	40	90
Family Support	80.0	20.0	60	100
Community Involvement	55.0	35.0	20	90
Personal Growth	60.0	30.0	30	90
Financial Stability	70.0	25.0	50	90
Emotional Well-being	75.0	20.0	55	95
Physical Health	85.0	15.0	70	100
Mental Health	70.0	25.0	45	95
Social Relationships	65.0	30.0	35	95
Work Satisfaction	60.0	35.0	25	95
Life Goals Achievement	55.0	40.0	10	90
Overall Quality of Life	70.0	30.0	40	100

Variable	Mean	SD	Min	Max
Age	35.2	12.5	18	65
Gender	50.0	50.0	0	100
Marital Status	65.0	45.0	0	100
Education	12.5	2.5	8	16
Income	3500	1500	1000	8000
Health Status	75.0	25.0	50	100
Stress Level	60.0	20.0	40	80
Life Satisfaction	70.0	30.0	50	100
Work-Life Balance	65.0	25.0	40	90
Family Support	80.0	20.0	60	100
Community Involvement	55.0	35.0	20	90
Personal Growth	60.0	30.0	30	90
Financial Stability	70.0	25.0	50	90
Emotional Well-being	75.0	20.0	55	95
Physical Health	85.0	15.0	70	100
Mental Health	70.0	25.0	45	95
Social Relationships	65.0	30.0	35	95
Work Satisfaction	60.0	35.0	25	95
Life Goals Achievement	55.0	40.0	10	90
Overall Quality of Life	70.0	30.0	40	100

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Age	35.2	12.5	18	65
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Marital Status	65.0	45.0	0	100
Education	12.5	2.5	8	16
Income	3500	1500	1000	8000
Health Status	75.0	25.0	50	100
Stress Level	60.0	20.0	40	80
Life Satisfaction	70.0	30.0	50	100
Work-Life Balance	65.0	25.0	40	90
Family Support	80.0	20.0	60	100
Community Involvement	55.0	35.0	20	90
Personal Growth	60.0	30.0	30	90
Financial Stability	70.0	25.0	50	90
Emotional Well-being	75.0	20.0	55	95
Physical Health	85.0	15.0	70	100
Mental Health	70.0	25.0	45	95
Social Relationships	65.0	30.0	35	95
Work Satisfaction	60.0	35.0	25	95
Life Goals Achievement	55.0	40.0	10	90
Overall Quality of Life	70.0	30.0	40	100